

REMARKS

Reconsideration of the above-identified application is respectfully requested.

This Preliminary Amendment is being submitted in connection with this Continuation Application in order to distinguish the claims over the prior art cited in the Final Rejection issued April 11, 2003 in connection with applicants Parent Application Serial No. 09/929,744. In that Office Action, the Examiner finally rejected Claims 1-9, 11-18 and 23-30 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,817,093 to Williamson IV et al. 093 (hereinafter “Williamson”). Furthermore, the Examiner finally rejected Claim 10 under 35 U.S.C. § 103(a) as being unpatentable over Williamson in view of Sherman (U.S. Patent No. 6,050,994 (hereinafter “Sherman”)). Applicants have also amended the specification to include reference to the parent application.

In response, Applicants hereby cancel Claims 19-22 which claims have been indicated as allowable and have been caused to proceed to issuance in above-identified Parent Application case U.S. Ser. No. 09/929,744. Claims 1-18 and 23-30 remain pending in this case with independent Claims 1 and 23 being amended to clarify their distinguishing feature.

Particularly, in the Final Rejection of April 11, 2003, the Examiner rejected Claims 1-9, 11-18 and 23-30 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,817,093 to Williamson IV et al. 093 (hereinafter “Williamson”). Furthermore, the Examiner rejected Claim 10 under 35 U.S.C. § 103(a) as being unpatentable over Williamson in view of Sherman (U.S. Patent No. 6,050,994 (hereinafter “Sherman”)).

Independent Claims 1 and 23 are being amended herein to clarify that the electric surgical apparatus comprising a high-frequency current generating means for delivering high-frequency output power with which high-frequency current is conducted to a

living tissue for the purpose of remedy; an output changing means for changing high-frequency output power that is delivered by the high-frequency current generating means; and a control means for controlling the output changing means so that high-frequency output power is delivered intermittently to the tissue over a plurality of time intervals, wherein after a first time interval, each successive power delivery interval is of equal to or shorter time duration than an immediate prior interval to enable tissue coverage over a wide range.

It is respectfully submitted that no new matter is being entered by the amendment as each of the Figures showing the application of power, e.g., Figures 5A, 7A-9A, 12A, 15A-17A, 22A, 24A, 26A, 28A, 32A, 33A, 37A, 39A-42A, 45A, 48-52A, in the various embodiments of the invention as originally filed, each show that after a first time interval (first application of power), each successive interval during which high-frequency power is applied is of equal to or shorter time duration than an immediate previous interval. Respectfully, this enables tissue coverage over a wide range as explained in the present application on pages 52, 2nd full paragraph to page 53, line 8, to wit:

As mentioned above, high-frequency output power is delivered intermittently. When a living tissue is coagulated over a wide range, the impedance offered by the living tissue during each delivery period gets larger than the one offered thereby during an immediately preceding delivery period. Likewise, the temperature exhibited by the living tissue during each delivery period gets higher than the one exhibited thereby during the immediately preceding delivery period. Moreover, rates at which the impedance of the living tissue increases during each delivery period and the temperature thereof rises during the same period get higher than the ones at which the impedance increases during the immediately preceding delivery period and the temperature rises during the same period. Rates at which the impedance of the living tissue decreases during each pause period and the temperature thereof drops during the same period get higher accordingly. Owing to this nature of living tissues, the control circuit 17 judges over how wide a range a living tissue has been coagulated.

Further, when high-frequency output power is delivered intermittently, the living tissue is coagulated over a wide range. Consequently, high-frequency current conducted during each delivery period gets smaller than the one conducted during the immediately preceding delivery period. Moreover, a rate at which high-frequency current decreases during each delivery period gets higher than the one at which the high-frequency current decreases during the immediately preceding delivery period. (See, page 64, first full paragraph of the present specification). Thus, it is taught by the specification that each succeeding time interval for applying power decreases as a result of the nature of the nature of the living tissue.

Respectfully, while the cited prior art Williamson's device applies high-frequency power to coagulate tissue as in the present invention, it appears to discontinue application of power only upon reaching a predetermined sensed impedance threshold level. In this approach, Williamson suggests calculating an impedance threshold limit, e.g., based upon a look-up table, known tissue impedance models, and a desired tissue effect, etc., and applying continuous high-frequency power to the tissue accordingly. However, in the Williamson reference, there is no teaching or suggestion of delivering power intermittently or at a plurality of intervals to the tissue.

Thus, it is respectfully submitted that the clarifying amendments to independent Claim 1 (and similarly, Claim 23) render these claims patentably distinct from Williamson. Further amendments are being made to dependent Claims 5-7, 9-10 and 13-18 (dependent upon Claim 1) and dependent Claim 28 (dependent upon Claim 23) in view of the changes made to independent amended Claims 1 and 23.

In view of the foregoing remarks herein, it is respectfully submitted that this application is in condition for allowance. Accordingly, it is respectfully requested that this application be allowed and a Notice of Allowance be issued.

If the Examiner believes that a telephone conference with the Applicant's attorneys would be advantageous to the disposition of this case, the Examiner is requested to telephone the undersigned.

Respectfully submitted,



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